



# 益松专注创新

Yisong focuses on innovation and reshapes the future of industry

# 新一代创新型章刀和 The new generation of innovative auto bender



东莞市益松数控科技有限公司 Dongguan Yisong High Technology Co.,Ltd.

Intelligent upgrades & smart unmanned

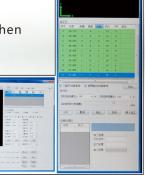
#### 第 益松弯刀机型号参数(YS-W24X1.0) Parameters List

☑ 平切	Straight cut		无缝对抗	妾		Seamless Joint			
☑ 桥位	Bridge		高低位置	置可调		Height adjustable			
☑ 冲孔	Hole		高低位置	置可调		Height adjustable			
☑ 鹰嘴	Lipping		大/小鹰	嘴		Big & Small Lipping			
☑ 打点/打齿	Nicking/Perforating		宽度/深	度可调		Width/Depth adjustable			
☑磨∨槽	V-shape broaching		宽度/深	度可调		Width/Depth adjustable			
☑ 智能检测	Intelligent detection		全智能	参数补偿		Intelligent parameter compensation			
☑ 折弯	Bending			°小圆弧折弯 0°小圆弧折	9半径:R1 弯半径:R3	90° small arc min. bending radius: R1 180° small arc min. bending radius: R3			
☑ 剪切	Cutting		最小剪块	初尺寸:1m	ım	Min. cut size:1mm			
刀料 Rule 适用		适用刀料厂	用刀料厚度*高度:0.71*23.8mm			Rule Thickness & Height : 0.71*23.8mm			
刀库 Rule cassette holder		全自动型、6 盘刀、逆时针刀盘 Fully-automated, 6 floors rule cassettes, rule anticlockwise c <mark>oiled</mark>							
送料方式 Rule feeding 双丝杆双		双丝杆双	夹循环送料	循环送料 Double ball screw loop feeding mode					
弯刀机软件 Software		益松刀模图形处理软件(支持文件格式 DXF 等)、益松弯刀加工 CNC 软件 Yisong cutting die files processing software (support DXF etc.) & Rule bending CNC software							
额定电压 Voltage	380V/50Hz 220V/50Hz		额定功率 Power	5 Kw	工作气压 Air pressure	0.6 ~ 0.8	设备重量 Machine weight	890 Kg	
机器尺寸 Machine size	100	弯刀机 Auto bender: L1713×W955×H1400 (mm) 刀盘架 Rule cassette: L1096×W879×H1400 (mm)							

# 學 益松弯刀机优势特点 Yisong auto bender advantages

#### ◎ 软件系统 (益松自创) Software system (Yisong's own creation)

- ◆智能炸角:一键全自动炸角(软件自动计算恰当的放开角度,免人工并可手动调整)、补偿数据图形化显示(所见即所得)、(飞机孔等)典型特征模型炸角与打断方案库自由定义与一键完成处理。
- ◆ 模拟折弯:可进行模拟折弯并可即时调整炸角而避免干涉,干涉效果所见即所得,免经验调整放角补偿。
- ◆智能分片:具备常规的手动定义分片及其补偿设置的全部功能、一键自动分片(运用大数据自动设置断口位置)并可手动修改、分片列表与图形对应显示。
- ◆ 多图处理: 图形处理系统与加工控制系统分离且不冲突, 大量多开图形处理软件不死机。
- ◆ 软件扩展: 自主开发的新型CAD技术底层平台, 智能化功能升级空间无限。
- ◆ 节省人工: 高度智能化, 大幅降低软件操作工作量及经验值, 无经验者轻松上<mark>手。</mark>
- Intelligent bending path angle processing: One click to generate bending path at proper angle enlarging, labor free and can adjust manually. Compensation data is graphically displayed; various typical angle handling can be free defined and one click processed.
- Bending simulation: Rule bending can be simulated and bending path angle enlarging is adjusted in real time to avoid interference. The interference effect is graphically displayed, no need experience to adjust compensation data.
- Intelligently decomposing rule bending path: Conventional rule bending path decomposing functions available; One click to decompose rule bending path and can be manually modified (Use big data to set the fracture position automatically), the decomposed rule bending paths are graphically displayed.
- Multi rule bending files processing: The graphical file processing system is separated from the rule processing control system, software won't crash when handling multi files.
- Software: The new type of independently developed CAD technology base platform is with unlimited upgrade space for intelligent functions.
- ◆ Labor saving: Highly intelligent, greatly reduce worker's software operation workload and is friendly to those with less experience.





# 學 益松弯刀机优势特点 Yisong auto bender advantages

### ◎ 智能检测(独创技术 – 专利保护) Intelligent detection(Original technologies - patents protected)

- ◆ 全角度折角或任意半径圆弧的折弯误差检测(高速全自动);
- ◆全自动智能设置补偿参数,并可存储不同硬度刀料补偿参数包;
- ◆ 任意新刀盘一次高速检测后即可高精准折弯, 且长久维持高精度;
- ◆ 检测后能自动适应机床硬件磨损误差(含弯头等磨损),可大幅度降低各部位精度修复频率。
- Bending tolerance detection for full range angle or any radius arc (Fully-automatic in high speed)
- Fully-automatic intelligently setting compensation parameters, can store compensation parameters for rules in different hardness.
- Any new rule coil can be bent in tight tolerance after a high-speed detection, tight tolerance maintains for long time.
- Can automatically adapt to machine hardware wear error after detection (including the wear of bending tool), greatly reduce the repair frequency for parts tolerance.

# ◎ 集群生产 Cluster production

- ◆ 一人操作弯刀主机即可控制多台弯刀分机与切线机进行集群生产;
- ◆ 弯刀分机与切线机简化硬件零件,节省机器购置费用;
- 全机采用安川电机及驱动器、控制板卡,功能强大,支持多台弯刀机联机集群生产。
- One staff can operate bender host to control multi bender extensions & crease cutting machines for cluster production.
- Simplified hardware parts on bender extension & crease cutting machine, saving machine purchase cost.
- Machine functions are powerful by adopting Yaskawa servo motors & drive, control board card, can support multiple auto benders connected for cluster production.

# 弯刀分机 Extension 弯刀分机 Extension 切线机 Cutter 弯刀主机

#### ◎ 模块化升级 Modular upgrade

- ◆ 初期可购置弯刀主机, 后期可新增弯刀分机或切线机, 模块式升级成集群化生产;
- ◆ 基础机型可不配打点/打齿、磨槽<mark>功能,</mark>可追加铣磨模块或其他功能模块进行升级,无需另购新机。
- In early stage you can just purchase a bender host, and add bender extension or crease cutting machine later for cluster production.
- ◆ Basic model is not be equipped with nicking/perforating/broaching functions, but can be upgraded by adding milling module or other functional modules and no need to buy a new machine.

#### ○ 全自动力库 Full automatic rule cassette holder

- ◆全自动换料:软件一键控制、全自动回拉料/升降/送料/剪切定位起点、缺料警示并自动停止;
- ◆可定义各盘仓刀料规格,一盘刀用完后自动切换到同款刀盘,也可自动按图纸要求切换对应刀料。
- Rule coils changing fully-automatic: One-click control on software to achieve rule gripping & returning into cassette, rule switching, rule feeding, cut to position starting point, automatic stop & alarm when lack of rule material.
- Parameters of each rule coil can be defined. When rule coil in one cassette runs out, can automatically switch to other rule coil with the same parameter. Also can automatically switch to corresponding rule coil according to cutting die file requirement.



#### ◎ 铣磨机构 Milling module

- ◆ 刀盘刀粒分体: 刀粒磨损只需换刀粒, 无需换刀盘;
- ◆ 磨槽刀粒远比整体圆盘刀硬度高、更耐磨、寿命长、价格低廉, 生产成本更低。
- Separated cutter wheel & cutting insert: Just replace new cutting insert when it wears, no need to change cutter wheel.
- Cutting insert is superior than cutter wheel: higher in hardness, more hard-wearing, longer lifespan, lower price and cheaper production cost.



#### ◎ 神模机构 Punching module

- ◆ 采用竖装结构,冲切高度自由可调,节省空间,换模方便;
- ◆可自由定义模具工位型号,系统自动切换对应工位冲切;
- ◆刀料端部剪切改用模具冲切,剪刀位置不再产生废料,出刀位置干净免清洁。
- Adopt vertical installation structure, easy to adjust the punching height, save space and convenient to change mould.
- Freely define the mould stations, and software can automatically switch to the corresponding mould station when punching.
- It won't generate rule waste as the rule front side is punched by mould station instead of scissor cut. The rule front side is flat and clean.











东莞市益松数控科技有限公司,致力于解决刀模行业痛点,专注于刀模制造全套自动化设备的研发、制造与销售。益松科技引进多年从事德/意等国高端设备研发团队,坚持贯彻"工匠精神",经过十年不断研发攻关,成功创新性发明了"环保刀模"锯板机、"智能"弯刀机,这些设备打破了刀模的传统制造工艺模式,融入了高自动化、高智能化的现代设备设计理念,采用了全新的设计工艺,为刀模制作带来了零污染、高精度、高品质、低成本、低维护、易操作、低人工要求、智能化的优质设备。

益松数控秉承着"科技先导,实用创新"的企业宗旨,以"立志解决刀模行业痛点,推动刀模行业向健康和可持续发展,努力为产业升级做贡献"为经营理念,坚持不懈研发创新,竭诚为业界提供刀模制造相关的高科技设备,并以专业、诚信、合作共赢、感恩的态度为广大客户提供优质且高效的精诚服务,积极为刀模设备的更新换代、产业升级、环保做出贡献!

Yisong is committed to industrial problems solving, focusing on the R&D, manufacturing and selling of fully—automatic die making machines. Yisong has introduced R&D teams who engaged in Germany / Italy high—end equipment research for many years, with craftsmanship spirit, we successfully released "Eco Die Board CNC Sawing Machine" & Intelligent benders after ten years' development. Our machines are totally different with traditional die making technology, bringing the die making with no pollution, tight tolerance, superior quality, low cost, low maintenance, easy operation, low labor requirements and intelligent working.

Yisong adheres to the enterprise purpose of "Guided by science and technology, practical innovation", and business philosophy of "Committed to industrial problems solving, making efforts on industrial upgrading and promoting healthy and sustainable development for die board industry". We insist on persistent R&D innovation. With professionalism, integrity, win—win cooperation and gratitude, we wholeheartedly provide our customers with high—tech die making machines & high—quality and efficient precise services, and actively contribute to the upgrading of die making equipment & industry!















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